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## ORIGINAL DEPARTMENT.

### LECTURES

ON

### EXPERIMENTAL PHYSIOLOGY.

Delivered in the Physiological Laboratory of the University of Pennsylvania,

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Reported for the MEDICAL AND SURGICAL REPORTER.

Lecture III.—Physiology of the Salivary Secretions.

(Continued from page 115.)

We come now, gentlemen, to the most important, as well as the most interesting, points in this branch of our subject; I mean the influence of the nervous system on the secretion of saliva. The numerous investigations which have been made on this subject, of which I hope to show you some of the more striking experiments, have yielded results of far more importance than that which they possess as bearing on the secretion of saliva alone. It is from the results of these experiments that has been deduced all our knowledge of glandular secretion, and its dependence upon the nervous system.

Before, however, you will be in a position to appreciate the results of the experiments I propose to make before you, it will be necessary that you should have an accurate knowledge of the anatomical relations of these glands, and particularly of their nervous supply. I will, therefore, give you a short sketch of as much of their anatomy as bears upon our subject, with an account of the operative procedure necessary to expose the glands, their blood vessels and nervous supply.

In the first place, you would be apt to infer, and in this case correctly, that the secretion of

saliva was a reflex action, from the fact that it is independent of the will, and was modified by impressions made upon the peripheral termination of afferent nerves; in other words, that this secretion was markedly dependent upon the sense of taste. You also know, that for the performance of a reflex action there must be an afferent fibre, an independent nerve centre, and an efferent fibre. From the fact that the sub-maxillary gland is the most exposed, and, therefore, the most readily operated on, we will confine our studies of the influence of the nerves upon the secretion of saliva to this gland.

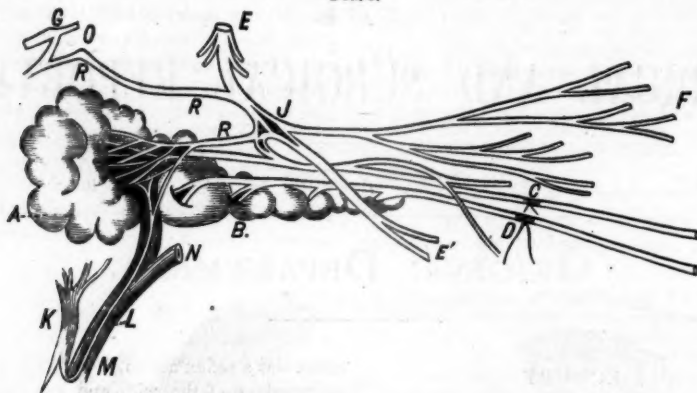
The afferent nerve fibres of this reflex circle, in the case of the sub-maxillary gland, are the lingual branch of the fifth pair and branches of the glosso-pharyngeal—the nerves of taste. The centre is the medulla oblongata, and the efferent fibre is the chorda tympani branch of the seventh, the facial nerve. The relations of these nerves are shown in the diagram on the board. (Fig. 1.)

The further anatomical details will appear as we give the account of the operative procedure. In the case of the parotid gland, the afferent nerves are the lingual and glosso-pharyngeal, the centre the medulla, and the efferent nerve the facial and the lesser superficial petrosal nerve to the otic ganglion, and from thence to the gland through the motor fibres of the auriculo-temporal. In some instances it appears that the otic ganglion may act as a centre of reflex secretory action, its afferent fibre being the glosso-pharyngeal communicating with the lesser superficial petrosal by the nerve of Jacobson, from the petrous ganglion, and the efferent nerve the auriculo-temporal. I will not stop to give you the grounds on which these facts rest, but as the mechanism of secretion

can be better studied on the sub-maxillary gland, pass at once to the operation necessary to expose it, referring those of you who wish to study the

ing from above and the other from below; this horizontal branch, as in the present instance, very constantly receives a vein from the gland.

FIG. 1.



NERVES OF THE SUB-MAXILLARY AND SUB-LINGUAL GLANDS OF THE DOG (after Bernard).  
A. Sub-Maxillary Salivary Gland. B. Sub-Lingual Gland. C. Wharton's Duct, with a Canula Inserted. D. Sub-Lingual Duct. E. Lingual Branch of Fifth Pair. F. Branches of Lingual distributed to Buccal Mucous Membrane. G. Facial Nerve. O. Vidian Nerve. R. Chorda Tympani. J. Sub-Maxillary Ganglion. K. Superior Cervical Ganglion. L. Sympathetic Fibre to the Sub-Maxillary Gland. M. Carotid Artery. N. Internal Maxillary Artery.

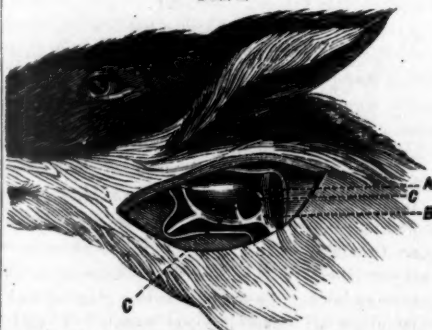
parotid to the many memoirs of which it is the subject.

The operation for exposing the sub-maxillary gland is quite a tedious one, and requires a great deal of care and delicacy in its performance; it would occupy too much time to carry on the operation before you, therefore I have already exposed the parts necessary for our study, and I will first demonstrate to you their surgical relations before passing on to the experiments. For this demonstration a large dog has been selected, chloroformed and fastened in Bernard's dog holder. After having shaved the hair from the lower surface of the jaws and the side of the neck, an incision was made along the inner border of the lower jaw, commencing about its anterior third and extending back to the transverse process of the atlas, dividing the skin and platysma muscle. After clearing away the connective tissue and fat, carefully avoiding all veins, the sub-maxillary gland comes into view, just below the angle of the jaw. It is then seen that the gland lies in an angle formed by the junction of these two veins which go to make up the external jugular, one branch coming from above downward, directly behind the gland, and usually receiving a small vein from the gland itself (as represented in Fig. 2), while the lower branch runs horizontally below the gland, and is formed by the junction of two other branches, one com-

This dissection requires care, to avoid wounding these large-veins.

Both branches which go to form the horizontal branch are now to be tied, the one coming from above receiving a double ligature, one where it comes over the ramus of the jaw and the other where it joins its fellow, the intermediate portion being removed. Having now carefully removed

FIG. 2.



VEINS OF THE SUB-MAXILLARY GLAND OF THE DOG—(after Bernard).

A. Sub-maxillary gland. B. Jugular vein. C. Glandular vein.

the cellular tissue from the portion of the wound in front of the gland, the thick belly of the digastric muscle comes into view, its fibres running forward from its origin in the temporal bone, to

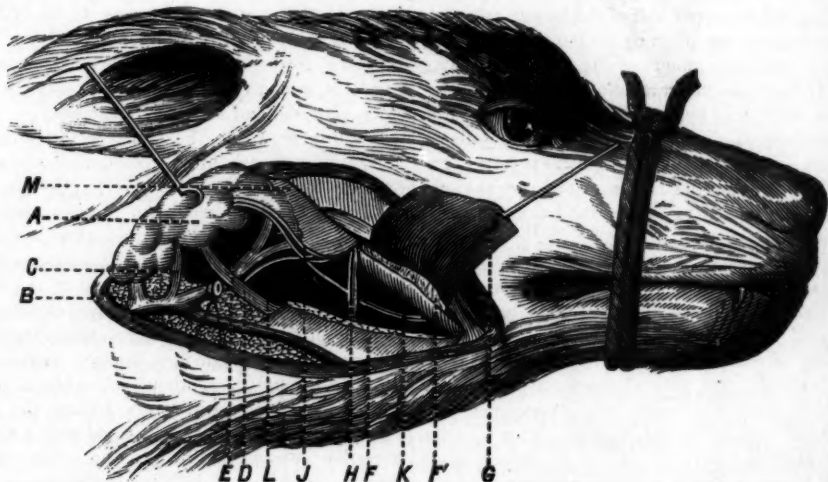
be inserted in the middle third of the ramus of the lower jaw, immediately in front of the insertion of the masseter, from which muscle it is separated by a slight groove. In front of the digastric the floor of the wound is formed of the transverse fibres of the mylo-hyoid muscle, crossed by the mylo-hyoid nerve, which comes out from under the jaw at the point of insertion of the digastric muscle.

We come now to the most difficult steps in the operation. The connective tissue is gradually to be cleared away, with a blunt hook, from the surface of the digastric muscle, and from the groove between it and the masseter muscle, taking care to avoid, as we get to the deeper portion,

muscular structure in the grasp of the ligature, it is pushed back to the temporal bone and tightened, and the digastric muscle divided in front of the ligature and removed. On carefully tearing away the connective tissue at the base of the wound, and drawing back the sub-maxillary gland, there is exposed a triangular cavity (represented in Fig. 3).

This space is limited above and behind by the deep surface of the sub-maxillary gland, into the hilum of which enter the artery, chorda tympani and sympathetic nerve fibres with the glandular duct. Its lower margin is formed by the genio-hyoid muscle, and the upper border by the ramus of the jaw and the masseter muscle;

FIG. 3.



PARTS EXPOSED IN THE OPERATION ON THE SUB-MAXILLARY GLAND OF THE DOG (after Bernard).

A. Sub-maxillary Gland, turned back, so as to show the nerve, artery and duct entering the hilum. B. Jugular Vein. C. Glandular Vein. D. Hypoglossal Nerve. E. Carotid Artery, giving off the internal maxillary. F. F. The divided Mylo-hyoid Muscle. G. The Anterior Half of the divided Digastric Muscle; the posterior half has been removed. H. The Lingual Nerve, giving off J. The Chorda Tympani. K. Sub-Maxillary and Sub-Lingual ducts. L. Sympathetic Fibre to Sub-Maxillary Ganglion. M. Masseter Muscle.

the facial artery, which passes over the jaw to run between these muscles, and the artery to the gland which comes from the facial and goes in this groove back to the gland. In the same locality lie also the ducts of the gland and the chorda tympani nerve. The digastric muscle is now to be separated, with an aneurism needle, from the facial artery, avoiding all the adjacent structures, and its muscular arterial branch tied. The muscle is then divided at its anterior third, or where it is inserted into the jaw, and its posterior extremity seized with a pair of artery forceps, and gradually cleared back to its insertion into the temporal bone, and surrounded by a ligature. Now, when it is assured that there is nothing but

the anterior portion of its floor is formed by the transverse fibres of the mylo-hyoid muscle, on which ramify the branches of the mylo-hyoid nerve.

At the posterior portion of this space the external carotid artery enters and runs along the base of this triangle, giving off first the lingual and then the facial arteries, from off the latter of which comes the artery of the gland.

Almost immediately after entering this space the carotid is crossed by the large hypoglossal nerve, running forward to be distributed to the muscles of the tongue, etc. Now, if this nerve is divided at the point where it crosses the carotid, and the central end removed, the pneu-

mogastric trunk comes into view, lying behind the artery. On pulling to one side the vagus trunk, below and behind it can be seen the white trunk of the sympathetic nerve, which here separates itself from the vagus to form the superior cervical ganglion, from which two small filaments pass out to accompany the carotid and the artery of the gland to enter the hilum. Some of the sympathetic fibres also pass into the gland, along the arterial branch which comes from the temporal artery and enters the superior part of the gland.

Then, to expose the chorda tympani and the salivary ducts, the fibres of the mylo-hyoid muscle are to be divided transversely at about their middle, avoiding the nerve and tying all veins, and the upper half of the muscle reflected. The lingual nerve then comes into view, passing from under the ramus of the jaw, and running downward and forward about parallel in direction with the hypoglossal. On drawing the parts toward the middle line, the two salivary ducts are seen passing along close together, immediately under the ramus of the jaw, the sub-maxillary duct lying nearest the bone and being a little the largest.

On tracing back the lingual nerve to where it passes from under the jaw, it will be seen that a delicate nervous filament here leaves the lingual and curves backward, along with the ducts, to enter the hilum of the gland; this is the chorda tympani. Immediately after the chorda leaves the lingual there is sometimes seen a small ganglionic enlargement, known as the sub-maxillary ganglion, and as the chorda enters the hilum it forms a slight ganglionic plexus with the fibre of the sympathetic.

Each of these nerves which it is desired to study should be carefully isolated, and surrounded with a thread, and a canula should be inserted into the sub-maxillary duct. To facilitate this last step the duct should be freed slightly from the connective tissue and closed with a clip or a ligature, as near the mouth as possible. Then the chorda should be stimulated, so as to distend the duct with saliva, and a small slip of wood or card passed under it, to act as a support. Now, if one edge of the duct, over the support, is seized by an assistant with a pair of fine forceps, while the operator seizes the opposite edge, and the duct is snipped between the two with a pair of sharp-pointed scissors, the canula can be readily inserted.

Being now familiar with the anatomical arrangement of these parts, and the operation necessary to expose them, we will examine the

mechanism of these nerves in the secretion of the sub-maxillary saliva.

I will withdraw the stilette from the canula which I inserted into the submaxillary duct, and there appears at the orifice of the tube a drop of clear saliva; I will wipe it away; no more appears. The secretion was momentarily excited by the irritation in the removal of the stilette. We will study, first, the reflex excitation of this secretion, and then study the course of the stimulus. To render this possible, we must allow the animal to come up from the anæsthetic for a few moments. I will now place a few drops of acetic acid on the animal's tongue, with a glass rod, and almost instantly the animal makes movements of mastication and of deglutition, and a drop of saliva appears at the orifice of the tube, falls off, and is rapidly followed by another. Notice the character of the secretion, which is now flowing quite abundantly; it is clear, alkaline, and somewhat tenacious.

I will now divide the trunk of the lingual nerve, near to its entrance to the mouth, and the application of acetic acid to the tip of the tongue causes no secretion. I put a drop on the base of the tongue and there appears a single drop at the orifice of the tube. This is explained by the fact that we have, by section of the lingual nerve, destroyed the appreciation of taste on one side of the tip of the tongue, while taste is still preserved, though in a lessened degree, at the base, through the continuity of the fibres of the glosso-pharyngeal. I will now irritate the peripheral end of the divided lingual with a weak induction current, and there is no effect other than the evidences of suffering in the animal. I will now irritate the central end, and though pain is still excited, there is quite a marked flow of saliva from the sub-maxillary duct.

Evidently, then, the normal stimulus for the secretion of the sub-maxillary gland in the dog lies in the excitation of the sense of taste, and the path of this sense lies in the lingual nerve. We will now chloroform the animal again.

You remember that I told you that this secretion was reflex, and for that process we require an afferent nerve, a nerve centre and an efferent nerve. We have already demonstrated the afferent nerve. The nerve centre lies in the medulla, and there probably exclusively, though Bernard thought that he had showed that under certain circumstances the sub-maxillary ganglion might act as a reflex centre for this process. I told you that the efferent or motor nerve for this gland was the chorda tympani. Let me demonstrate it to you.



The chorda tympani is a very delicate nervous filament, which leaves the trunk of the facial nerve in the Fallopiian canal, about four or five millimeters before it passes out at the stylo-mastoid foramen, and then arching upward and forward, enters the middle ear, which it traverses from behind forward, lying in the thickness of the membrana tympani. Here, for a space of from six to eight millimeters, the nerve is comparatively isolated, lying between the handle of the malleus and the vertical process of the incus. It then passes toward the Glasserian fissure, and leaves the skull, in the neighborhood of the spine of the sphenoid, to join the lingual. The simplest method of dividing this nerve is to operate on it where it crosses the tympanum; to accomplish this I will introduce this small, sickle-shaped knife into the external auditory canal, the animal being profoundly chloroformed, keeping the cutting edge directed upward, and passing the back of the blade downward and forward along the inferior wall of the meatus, until the tympanum is reached. Pushing the blade through the tympanum, causing a sound like tearing paper, the knife is now in the middle ear. Upon depressing the handle of the knife, and consequently elevating the blade until it comes in contact with the roof of the tympanum, and withdrawing the knife in this position, the nerve is divided. Suspending the chloroform, and allowing the animal to regain consciousness, let us now see what is the effect of irritating the central end of the lingual. There is no secretion of saliva. In this experiment the lingual must be irritated with a weak current, and as near the mouth as possible, to avoid the spreading of the current to the chorda itself.

This experiment alone would render it probable that the chorda was the path through which the reflex stimulus reached the gland. I can, however, make it positive for you. I will divide the lingual trunk above where it gives off the chorda, simply for convenience in reaching this filament, and then place the chorda itself on the electrodes and pass through them a weak induction current. After a few seconds the saliva begins to flow from the tube, and it is now running in quite a stream. We have then shown that the secretion of sub-maxillary saliva is under a reflex nervous influence, and that the sense of taste is the normal stimulus, reaching the brain through the fibres of the lingual and glosso-pharyngeal nerves, and reaching the gland from thence through the fibres of the chorda tympani. We have now to study the mechanism by which

saliva is separated by the gland from the blood, and the influence of the various nerves on this process.

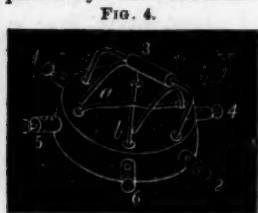
I will again stimulate the peripheral end of the divided chorda tympani, and observe closely the results. Notice, first, the appearance of the gland itself; it is pale; there are few arborescent vessels to be seen upon its surface, and the blood which is leaving the gland is dark, and the vein small. I will irritate the nerve with the secondary coil twenty centimeters distant from the primary. In a few moments the saliva flows abundantly; we will collect it by attaching a rubber tube to the canula and receiving the secretion in this glass. Now that the gland is secreting actively, look at the change in its appearance. Its surface is rosy pink; numerous branching vessels are seen, and the blood that flows from the gland is almost arterial in hue, is in much larger quantity, and the veins are seen to pulsate synchronously with the heart. If the gland has been long exposed its surface will be dry, and these results less marked. Evidently, stimulation of the chorda has increased the blood supply of this gland, either through an active dilatation of the vessels, or more probably through an inhibition of a local vaso-motor centre. You will see an analogous result when we come to experiment upon the depressor nerve, a vascular nerve which acts through the paralysis of the vaso-motor centre.

We have, then, two results following stimulation of the chorda tympani; an abundant secretion of saliva and a marked hyperæmia of the gland. Before, however, we discuss the relations between these results, whether the one is the necessary effect of the other, let me show you the influence of the sympathetic on the secretion.

You know that a constant result following the stimulation of a fibre of the sympathetic system is the contraction of the arterioles and a consequent diminution of the supply of blood to the part supplied by the nerve. I will raise up this filament which leaves the superior cervical ganglion and passes to the gland along the carotid, and irritate it with a weak induction current. There is a momentary flow of a few drops of saliva, soon, however, followed by a complete cessation of secretion. Notice, however, the striking difference between the secretion now at the mouth of the tube and that which follows stimulation of the chorda. This saliva is remarkably viscid; it can be drawn out in a long thread, from the orifice of the tube. It is of higher specific gravity, and richer in organic elements than that which followed stimulation of the chorda; in

other words, the chorda saliva contained a maximum quantity of water and a minimum of organic elements, while in sympathetic saliva the proportions are reversed. Look now at the effects of stimulation of the sympathetic on the vascularity of the gland. I will again irritate the sympathetic filament; in about a minute the arborescent vessels disappear from the surface of the gland, its tissue is much paler, and the vein of the gland is contracted, and bears a small quantity of black blood. In both respects, then, the functions of the sympathetic and chorda are antagonistic.

Let me show you this a little more clearly. I will first find the minimum stimulus for the chorda tympani, and then the weakest current which will excite the functional activity of the sympathetic. You remember that the secretion does not immediately follow the stimulation of the chorda, but after an appreciable interval. Now, if I alternately stimulate these two nerves at short intervals, with a current which, applied alone to either nerve, would produce its characteristic effect, there is no result. This change in the direction of the currents is accomplished by Pohl's commutator (Fig. 4.). It consists of a disk of



POHL'S COMMUTATOR.

wood, with six cups on its upper surface containing mercury, and each electrically continuous with a binding screw. The screws 1 and 2 are connected with the battery, and their cups are connected by a handle, the ends of which are copper wire, while the centre is of insulating material. Each of the copper wires is crossed, before it enters the handle, by a wire arch, one end of each dipping into the cups 3 and 4, when in the position shown in the figure. The current from the battery poles 1 and 2, therefore, passes out 3 and 4, to a pair of electrodes. When it is desired to throw the current into the electrodes 5 and 6, the wire handle is moved to the left, so the left ends of the wire arches dip into cups 5 and 6. In this use of the instrument, as a double key, the cross wires *a* and *b* are removed; they are used when it is desired to change the direction of a constant current. For example, they being in place, and the handle in the position represented in the figure, if 2 is the positive pole and 1 the negative, the electrode 4 will be positive and 1 negative. If, however, the handle is moved to the left, as before, the positive current will pass from 2, along the arch, to

6, and along the cross wire to 3, making that the positive pole, while the negative pole will be similarly transposed to 4.

Evidently there is a complete opposition of vasomotor function in these two nerves; but is the secretion of saliva simply dependent upon the vascular condition of the gland? Does the gland act as a sponge, filtering out the saliva from the material in the blood, the quantity being solely dependent upon the quantity of blood in the organ? There is no doubt that an increased supply of arterial blood to any organ, more especially a gland, is followed by an increased functional activity of that organ; "but it does not necessarily follow that this activity should take the form of a secretion."

As Foster has put it, "It is quite possible to conceive that the increased blood supply should lead only to the accumulation in the cells of the constituents of the saliva, or the materials for

FIG. 5.



DIFFERENTIAL MANOMETER.

Diagrammatic Section. By turning the cock  $90^\circ$ , *b* and *c* communicate, while *a* is isolated.

their construction, and not to a discharge of the secretion. A man works better for being fed, but feeding does not make him work, in the absence of any stimulus." In fact, Ludwig has shown that when an animal is decapitated, and the motor nerve of the gland stimulated, there will be a flow of saliva, even in the absence of the circulation.

Then, again, I can show you that the secretion of saliva occurs under a greater pressure even than that exerted by the blood. I have inserted into this dog's carotid artery a canula, and will connect it with a manometer. I will not stop to

give you the steps of this operation, as we will study it at length when we come to the physiology of the circulation. I want, however, to call your attention to this manometer, which is different from the forms usually employed.

As seen in the diagram (Fig. 5), it consists of three straight tubes, of small bore, fitted into a steel base, so bored as to give a horizontal tube, closed at both ends, and tapped in three points, so as to be continuous with the calibre of the three upright tubes. At the point where the middle upright tube connects with the transverse tube a cock is fitted, so designed that when in the position represented the tubes *a* and *b* are connected, thus forming a *U*-shaped tube, while *c* is entirely isolated. Now, when the cock is turned a quarter of a circle, *b* and *c* form a *U*-tube, while *a* is isolated. *b* is furnished with a graded scale. Each of the side tubes is connected with a pressure bottle. I have now connected the carotid artery with the tube *a*, and the cock is so turned that the tubes *a* and *b* are continuous, and the mercury with which they are all filled at equilibrium. I now take the clip off the artery, and immediately the mercury is depressed in *a*, and rises in *b* to a height of 70 millimeters, giving a blood pressure, therefore, of 140 millimeters. After having found that that is the maximum pressure, I again put the clip on the artery, and the mercury falls to 0. Then, turning the cock so as to make *b* continuous with *c*, which latter is connected by a fine rubber tube, filled with water, with the salivary duct, I irritate the chorda tympani, and the saliva is rapidly poured out, raising the mercury on the scale to 80 millimeters, ten millimeters above the point of maximum arterial pressure. It would probably rise still higher if I continued to stimulate the chorda, but as I have shown you all I desired, I will stop this experiment, as I do not want to exhaust the nerve and gland.

We see, then, that the pressure exerted by the saliva is greater than that of the blood, a fact which could not be explained without the intervention of some process other than a mere filtration.

There is, however, still another experiment which will strengthen this conclusion. I will inject into the jugular vein of the dog, toward the heart, 0.015 grams of atropia, in aqueous solution, and in a few minutes again irritate the chorda tympani. There is no flow of saliva, but on observing the gland all the vaso-motor phenomena which were present under the same circumstances before the atropine was injected can

still be seen; the gland is markedly hyperæmic. By injecting a solution of pilocarpin, however, a drug which has been found to cause salivation through irritation of the secretory fibres of the chorda tympani, the paralyzing effect of the atropin can be antagonized, and the gland again made to secrete. The dose of pilocarpin which, when introduced into the general circulation, would be able to remove the effects of atropin, would probably be fatal to the animal. If, however, the drug is allowed only to enter the circulation of the gland, a much smaller quantity will be efficient, without danger to the animal. You remember I showed you that poisons injected into the duct of one salivary gland were rapidly absorbed and eliminated by the opposite gland. We can make use of that observation now. I will inject very gently into this sub-maxillary duct 0.017 gram of pilocarpin, and after waiting about half a minute, irritate the chorda tympani; there is now a slight secretion, soon, however, passing off, as the stronger effect of the atropin makes itself felt again. It can, however, be again suspended by a second dose of pilocarpin. Instead of injecting the poison into the duct, it might have been injected into the glandular artery, a tedious proceeding, however, and one which is not much more reliable than the easy method I have employed. In injecting the duct no force must be used, and only a small amount of fluid introduced.

Evidently, then, the chorda must contain two sets of fibres; the one vaso-dilator, not paralyzed by atropin; and "secretory" fibres, paralyzed by that poison. It is only by the existence of a class of nerves which act through calling into activity the protoplasmic energy of the secreting epithelial cells, that these facts can be explained. When the chorda is irritated, two sets of impulses travel along the nerve; one impulse acting on the blood supply of the gland, while the other acts on the secretory elements of the epithelial cell in a manner analogous to that which occurs when a motor nerve going to a muscle is irritated. The muscle contracts through the impression on the contractile elements of the muscle cell, and the blood vessels dilate through vaso-motor influence. Indeed, we can carry the parallelism still further, for we know that curare, by destroying the irritability of the motor nerves, will prevent contraction of the muscles when those nerves are stimulated, in the same manner that atropia will prevent the secretion of the gland when its secretory nerve is stimulated; in both instances the vaso-motor phenomena remain.

## COMMUNICATIONS.

## AN EPIDEMIC OF OBSCURE PULMONARY DISEASE.

BY THOMAS M. MATTHEWS, M.D.,

Of Edom, Texas.

The last week of December, 1878, and the first two of January, 1879, were the coldest, and perhaps in every way the most severe ever known in this region. For that space of time the whole face of the earth was covered with snow and ice. After this we had more rain than is usual. Following this very cold weather there broke out a severe and, save in the hands of the few educated and reading physicians in the country, very fatal epidemic of cold, influenza, pneumonia, or something. It is the intention of this article to describe, as far as the writer is able, the disease as it presented itself to him, and to elicit opinions from others thereon. The patient, usually one who had suffered from, and was more or less debilitated by, repeated attacks of chills and fever during the summer and fall, would seem to be taking cold; complain of a feeling of weariness or lassitude; aching of the limbs and back, as is usual in the bilious attack incident to this climate. There was usually, but not always, more or less pain in the head, referred for the most part to the frontal sinuses, or through from one temple to the other. These feelings, in many cases, were attended with rigors and flashes of heat; almost always ending in a chill, followed by fever, but rarely attended by very much heat of skin, the temperature rarely exceeding 104° Fahr., the pulse ranging from 110 to 125, with a prostration or debility far greater than would seem to be warranted by either the short time the patient had been sick or the apparent mildness of the symptoms. These cases were in every instance attended by cough, generally loose. Now the patient begins to complain of pain, usually on the right, but often on both sides, just at the lower border of the ribs, seemingly on one side, where the liver, and on the other, the spleen, meet, if such an expression be allowable, the lung. The respiration, so far as I observed, in a number of cases, was never very hurried; nothing like what we usually see in pneumonia. The face, in most cases, had a dark red, sometimes almost livid spot on one or both cheeks. Auscultation showed a moist ronchus all over the chest, usually. I never heard the fine crepitus of pneumonia, though I often examined carefully for it. On percussion, the chest was invariably resonant, and sometimes, in the later stages,

dull immediately over the seat of pain. There was always more or less delirium, from which it was, however, never difficult to rouse the patient, who, when undisturbed, would sleep all the time, whether under the influence of an opiate or not. The expectoration, never profuse, or even free, though the cough appeared "loose," was, in every case I saw, at first streaked with blood, as in the early stages of pneumonia; this existed only for a very short time, such sputa appearing only two or three times. It invariably passed from this to a white, glairy, tough mucus, mixed in the later stages with a substance like laudable pus. I never saw any rust-colored sputa, at any time, in any case. The breathing, as I said, was never much more hurried than in ordinary cases of fever, and the pain was little, if any, greater upon deep inspiration. The bowels were, as a rule, undisturbed, except that if an active cathartic were given, even though well guarded, they invariably became irritated, and henceforth, throughout, hard to control. I never saw the stomach disturbed by nausea, except that which could be attributed to medicine. The disease, when properly treated from its onset, was easily controlled; when allowed, so to speak, a good start, was not unmanageable in the hands of educated physicians, while, as already intimated, quacks, or, as the REPORTER terms them, "cheap John doctors," under any circumstances, lost nearly all their cases. In the outset a mild purgative, followed by full doses of quinine, combined with camphor and opium, alternated with good whisky and ammonia, given pro re nata, aided by turpentine stupe, mustard poultices and mush poultices, to ease pain, with a full dose of Dover's powder, to ensure rest when needed at night, almost invariably gave relief. Blistering, so far as my observation went, never did the slightest good.

Now, what was it? It strongly resembled pneumonia, I admit, more strongly than any other one disease; yet, that it lacked some of the most distinctive features of that disease no one can deny. I hear that it has raged all over the southern country, and everywhere has been more fatal than even here. Was that due to the same cause, quackery? I know the South, and Texas, particularly, are full of the article. I call it "winter fever," the result of malaria, the pons assinorum of medical men, combined with cold and wet. Or perhaps 'tis what I used to hear of when a boy, as the "Tyler Gripe." Will some older man in the profession tell me, if so?

P.S.—Since writing the above, I see in the REPORTER of March 8th, page 208, a synopsis of



a lecture at the Pennsylvania Hospital, by Prof. Da Costa, on the Prevailing Epidemic of Influenza. I suspect that this is the same disease perhaps, yet the difference is very marked in most, while it tallies in some of the leading features, as can readily be seen by comparison.

## HOSPITAL REPORTS.

### PENNSYLVANIA HOSPITAL.

SURGICAL CLINIC OF DR. R. J. LEVIS.  
SERVICE OF 1879.

Reported by N. H. CHAPMAN, M.D.

#### Fracture of the Lower Jaw—Its Liability to Occur at One Place—Treatment by Means of a Pasteboard Splint.

GENTLEMEN:—The patient before you, a man of about thirty years of age, is suffering from a fracture of the inferior maxillary bone. He has just been admitted, and I will therefore have the opportunity of showing you the characteristic features of the case without any difficulty.

Fractures of the lower jaw are of moderately frequent occurrence, though they are by no means as commonly seen as many of the other fractures in the body. When they do occur, however, it is usually from direct violence; as, for instance, from a blow inflicted directly upon the parts by the fist, by a club, or bludgeon, or by the kick of a horse; though they may also be the result of violence indirectly applied. When the angles of the jaw are pressed together by the wheel of a wagon passing over them, and the bone breaks at some other point from that to which the pressure is applied, the fracture may be said to be due to indirect violence. But occurrences of this kind must be set down as very uncommon.

The inferior maxilla may be broken anywhere throughout its entire extent. It may be broken at the symphysis, anywhere in the body, at the angle, ramus, or either of its processes; but from all the ordinary causes, fractures of this bone are exceedingly liable to be at one place, *i.e.*, in the vicinity of the mental foramen. Why this should be is a little hard to understand. The mental foramen is not very large, and whether the bone is weakened by this absence of osseous matter enough to account for its being the most common seat of fracture, is doubtful; it is much more likely due to the frequent loss of teeth, and consequently a lessened amount of alveolar processes in this situation. Whether this be a true explanation or not you may judge for yourselves, but the fact that the portion of bone in the vicinity of the mental foramen is the one point at which fractures from the ordinary causes usually occur, is certainly worthy of note. True, in case the fracture be caused by a wagon wheel, or the like, which produces compression of the jaw from side to side, the bone gives way in the middle line, and the fracture is at or near the symphysis, but this condition, as I have already said, is very rare.

In the man before you, all the ordinary symptoms of fracture of the lower jaw are present. There is pain on attempted motion of the frag-

ments, which is severe and well marked. In this fracture severe pain is the rule, and it is worthy of note that this pain is more intense and more continuous than that which we ordinarily find in connection with the fractures about the body, for the reason that the inferior dental nerve is so very frequently injured or pressed upon. There is also some mobility, though this symptom is not so striking a feature here as it is in fractures of the long bones, for the reason that the bone is only broken upon one side, and the fragments (especially the anterior) are held quite firmly in position by antagonistic muscles. Crepitation is present, and in this case is best elicited by making pressure upon the posterior or smaller fragment. I also notice that the teeth upon the fractured side corresponding to the two bicuspsids are lost. The line of fracture can be distinctly felt, and I locate it in the neighborhood of the mental foramen. It may not be through this foramen, but it is not far from it, to one side or the other. I find very little obliquity in the line of fracture, but there is some slight displacement, not a great deal, amounting to perhaps two or three lines in all. The posterior fragment is inclined slightly upward, while the tendency of the muscles attached to the anterior fragment is to draw it downward and a little backward. The muscles directly concerned in this action are the geniohyoid and the mylo-hyoid, or those passing from the lower jaw to the hyoid bone.

The prognosis in this class of cases is very favorable. As a rule, union readily takes place. We ought to have pretty firm union here in about twenty days, and no doubt we will obtain it by that time.

In treating this fracture, the indications are to put the anterior fragment up in close apposition with the posterior, and retain it there, so that nature can have an opportunity to unite the two. To adjust the lower jaw in this manner, we make use of some sort of a splint. A very simple one, which answers the purpose admirably, is made by taking a rectangular piece of pasteboard, hollowing it out on one side, slitting it up at the ends, and doubling it over so as to make it fit the chin. It is then held in position by a few turns of the Barton bandage. Instead of using the pasteboard, this same form of splint may be made of several layers of adhesive plaster stuck together and cut in the same way. There are a variety of contrivances for the treatment of this fracture, all of which are more or less complicated, but this plan is very simple, and under ordinary circumstances proves to be all that is necessary. In cases, however, where there is much displacement, or the parts cannot be properly adjusted, the teeth can sometimes be wired together in such a manner as to keep the fragments in close apposition; or the fragmental ends themselves can be wired together, without the fear of producing any bad results.

#### Amputation of the Thigh in its Middle Third, by the Antero-Posterior Flap Operation, for the Relief of Long Standing Necrosis.

This man, aged forty years, whom many of you will doubtless remember, was admitted to the house some time ago, with extensive necro-

sis about the knee joint. He has been a sufferer from bone disease for a long time. He tells us that he has been troubled more or less with this knee for the last eighteen years, and that at times his sufferings have been almost beyond endurance. The condition is one of necrosis of the lower end of the femur, with, undoubtedly, an extension of the disease to the shaft of the bone, a condition which is, indeed, a serious one, and demands the most careful, as well as cautious, consideration. When he came into the house I did not deem it advisable to perform any operation for his relief then, owing to the existence of severe nervous shock; but now, after carefully considering the case, and consulting with my colleagues (Drs. Morton and Hunt), we have come to the conclusion that the only thing to be done is an amputation of the thigh. This is the only thing which gives any hope of relieving the man of his suffering. He may die from the effects of this operation, but if nothing were done for his relief he would surely die, within, at most, a very limited time, so we will give the man a chance for his life, and do all we can to carry him safely through.

In performing an amputation of the thigh I am not so particular as to the kind of operation employed. The circular and the flap are both operations which have their points of especial value. The circular is perhaps the better operation of the two where there is serous infiltration, or an undue amount of adipose tissue. The flaps of a flap operation in such cases as these would be large, boggy, and apt to give trouble. But here, where no such condition exists, the flap operation is probably preferable to the circular. As to the variety of flap operation, there is not much choice. A great deal depends upon the condition of the limb. If it is shattered, and the soft parts considerably lacerated, the flaps will necessarily be more or less irregular, according to the nature of the injury. They may be more than the conventional two in number, as well as very irregular in shape, and still be all that is required to form a good stump. Where the kind of flap is a matter of choice, however, you may employ either the short anterior with the long posterior flap, making the one a little less and the other a little greater than the semi-diameter of the limb, which is the ordinary operation; or you may reverse this and use the long anterior with the short posterior flap; but this possesses no especial advantage over the other. Or again, you may use what is termed the rectangular flap. These flaps are made square at the ends, and of about the same thickness throughout, the anterior flap being made of sufficient length (one-half the circumference of the limb at the seat of amputation) to enable it to be bent upon itself in such a manner that the square extremity will fit upon the end of the short flap. The length of the posterior or short flap is about one-fourth that of the anterior. This form of amputation was originally suggested by Mr. Teale, and is now known as the "Teale operation." It is very good in many respects, but it has the disadvantage of cutting considerable tissue, so that in case slough should occur it would become a more serious matter than a like occurrence from the ordinary operation.

You will notice that we are giving the patient

ether, and applying Esmarch's bandage to the affected limb at the same time. These are two very important elements, greatly influencing the success of an operation of this character. The ether saves shock to the system, and the Esmarch saves blood. In administering the ether, let me say that the cloth should not be taken from the face after its inhalation has been once fairly begun, for excessive admixture of atmospheric air only causes excitement, and inclines the patient to struggle. In the application of Esmarch's bandage it is well to elevate the limb, and give the blood the advantage of gravity, in order that the vessels may be emptied with greater facility. By thus applying the bandage, and forcing the blood up out of the limb, it actually increases the quantity in the rest of the body. So that if there is no undue hemorrhage after the removal of the bandage, the man will certainly have more blood, relatively to the size of his body, after the operation than he had before. There is one point in connection with the application of this bandage to which I desire to call your attention. The original bandage, as suggested by Esmarch, is provided with a round constricting band of caoutchouc. Now, when this band is flaccid it is apparently broad enough, but when it is put upon the stretch and tightly applied, it is very small and cord-like. It produces narrow linear pressure, which, when brought to bear upon important nerves, is frequently the cause of temporary paralysis and other like inconveniences. To obviate this difficulty, I had constructed, some years ago, the broad rubber constricting band which you see here being used. It is broad and flat. It does not in any way produce narrow linear constriction, but its pressure is more diffused and equable. Its virtues have been abundantly tested, and it may be confidently employed without the fear of producing any troublesome after consequences.

I am not yet satisfied as to just how high up it will be necessary to amputate in this case. The diseased bone may be more extensive than I anticipate. The bandage is therefore carried as high up on the thigh as possible, and a tourniquet is put in position over the femoral artery in Scarpa's space, so that in case it is necessary to amputate higher up than the middle third, I will be able to do so without embarrassment.

In performing this operation I gather up the mass of muscles and integument on the anterior part of the thigh, transfix in front of the bone with a catlin in the middle third, and make the anterior flap by cutting from within outward. I then transfix behind the bone below (having the entrance and exit of the knife the same as before), and make the second or posterior flap in a similar manner, being at the same time careful that it is somewhat longer than the first. Now, divide the bone at right angles with its shaft, and the operation is done.

On examining the end of the divided bone at the seat of amputation, it shows a condition of chronic osteitis. The bone is somewhat thickened, and there are evidences of existing periostitis. The medullary cavity, however, seems to be in a sufficiently healthy condition to prove favorable, so that I do not deem it necessary to carry the amputation any higher up the thigh.

The flaps in this case exhibit a condition which is not commonly seen. They are soft and flabby, from long standing osseous disease. The muscles do not retract of their own accord, as is ordinarily the case after amputation for an acute injury, or the like, but they require retrenchment before the flaps can be considered in a proper condition for approximation.

The main artery which requires our attention is the femoral. In taking up this vessel I separate it somewhat from its surroundings, so that it can be easily ligated with a good strong catgut ligature. It is always well, in tying a vessel of this size, to employ a triple knot, in order to be perfectly sure that so large an artery is well secured, for it would, indeed, be a sorry thing to have a ligature give way on the femoral artery. As the constricting band is now slowly removed, I will ligate what bleeding vessels may remain. In doing so, I find an abnormal number of small vessels close around the bone, in the neighborhood of the periosteum, which require quite a number of ligatures to sufficiently restrain the hemorrhage, so that the flaps can be safely brought together. In uniting the flaps immediately after the operation is over, it is well to use a sufficient number of sutures to bring the parts in pretty close apposition. In this case ten interrupted wire sutures are used, but this is not too many to properly secure the parts. After having sewed up the flaps in this way, I am in the habit of entering the nozzle of a syringe into the wound, and distending the entire cavity with carbolyzed water. It cleanses out the cavity, washes away all foreign matter, and if it does no more, acts as a disinfectant. The stump is placed in an easy, slightly elevated position, upon an inclined plane, in order to relax the muscles on the front and inner portion of the thigh. The only dressing which it will require is a covering of waxed paper, and this is merely for protection. In this house the waxed paper has entirely superseded that very much more expensive article which was formerly so much in use. I refer to oiled silk. The waxed paper answers every purpose, and is so cheap that it never need be used more than once. It is very easily prepared, by dipping sheets of paper in a melted solution of oil and wax. The papers are then exposed to the air, and when thoroughly dry, are ready for use.

**Results of an Amputation of the Leg—Mode of Dressing and Cleansing the Stump—General Symptoms and Treatment of Surgical Shock.**

You have just seen me perform an amputation for the relief of long standing ossific disease, and it may not be uninteresting for you to see this man (aged about 30 years), who exhibits the results of an amputation made necessary by a railway injury. Here the seat of the amputation was not the thigh, as in the case which has just left the room, but, as you see, the lower part of the leg, near the junction of the middle with the lower third. The kind of amputation, too, was a little different, it being in this case that known as the lateral flap operation.

When this man came into the house he was suffering from a condition of severe shock, due to the injury he had received a short time before.

From this condition he fully reacted before the amputation was performed. He also reacted well after the operation, and is now doing very nicely. The stump is in as good a condition as we could desire, and will probably heal kindly, without the occurrence of any untoward circumstance.

It will, no doubt, be interesting for you to see my assistants dress and clean the stump, in the manner usually followed in this hospital. These are small points, but they are frequently of more value in influencing the success of a case than many larger ones. You notice that after the removal of all previous dressings, a stream of carbolyzed tepid water from the "hospital carriage" is allowed to flow over the parts. This washes away the greater portion of the secretions which accumulate about the stump. Where there are any adherent secretions that will not readily come away under the stream of carbolyzed water, a pledget of carbolyzed oakum is used, instead of a sponge, as was the custom formerly, to loosen and detach any such remaining particles. For purposes of cleansing, the oakum is far preferable to a sponge. In this house sponges are not used, for the reason that they are expensive and hard to keep clean. The oakum is equally serviceable, and costs but a trifle. It is used once and then thrown away. If sponges be used, no matter how carefully they may be cleansed, they will often be the means of carrying disease from one patient to another. The only safe plan, then, is not to use such vehicles of disease at all, but to employ some cheap substance that can be used once and then destroyed. These indications are fulfilled better by oakum than by any other substance with which I am familiar. Then, too, oakum has the advantage of containing a small amount of tar, and of being rendered antiseptic by carbolic acid. This simple procedure in the manner of cleansing a part lessens, or perhaps does away with, that troublesome hospital affliction, pyæmia or blood poisoning, which is so frequently produced by the repeated use of the same sponges in dressing the wounds of different patients.

A few moments ago I said that when this man came into the house he was suffering from a condition of nervous depression—a condition of shock. A condition which may, indeed, be said to be the depression of the vital powers of the economy which follows severe injuries and surgical operations. It is of very common occurrence, and exceedingly so after railway injuries. Especially is it noticeable after such severe injuries and accidents as the fracture or mangle of a limb, or the crushing and laying open of a large joint. Then, too, the performance of the various surgical operations inflicts more or less shock upon the system. As a rule, the capital operations of surgery give rise to a greater amount of nervous depression than those of less importance, though this is by no means always the case. John Hunter, a long time ago, said that the most alarming results would at times follow the simplest of surgical operations. The introduction of a male catheter, or the tapping operation for hydrocele, have been the cause of fatal shock.

But what are the leading symptoms of this common condition? They are pallor of the countenance; coldness of the surface; a feeble



pulse; irregular respiration, and, perhaps, nausea, or nausea and vomiting. There may be muscular tremors, and the skin may at times appear somewhat jaundiced. These symptoms are usually rapid in their onset, and of longer or shorter duration, according to the severity of the shock, as well as the ability of the vital powers of the economy to react and throw off its depressing influence.

The usual plan of treatment, as carried out in this house, is by fresh air; a loosening of all constrictions about the neck and waist; a free use of the smelling bottle, passed rapidly to and fro under the nose; stimulating injections, as of turpentine, ammonia, mustard and water, etc.; strong, hot coffee; warmth in bed; sinapisms and hot fomentations to the epigastric region. This plan of treatment will usually bring about a salutary reaction. Among the first indications of this result will be noticed a return of color to the lips and countenance; a quicker and fuller pulse; the respirations will be more regular; there will be an occasional sigh or yawn, indicative of a desire to take a full inspiration. The surface of the body will increase in temperature, and consciousness will return.

These symptoms of reaction are the ones we are to strive to bring about in all cases where this condition of nervous depression exists, before we can consider the propriety of any operative procedure whatever. It is never judicious practice to operate at all until after the system has reacted from this depressed state. If this indication be not observed, and an operation be inflicted upon a patient during the existence of severe shock, the danger to life is very much increased. The shock of the injury or accident is enough; and to add to this the shock of an operation simply means to more completely exhaust the vital powers, and render reaction just so much more uncertain, if, indeed, it be not by this time impossible.

#### Crushed Elbow Joint.

I will show you one other case, which will come in very nicely as an illustration of what I have just been saying in reference to the impropriety of performing any serious operation during the existence of severe shock.

The man before you, who is a German, of about forty years of age, was admitted to the house three weeks ago last Monday. He had received an injury about the elbow joint, by which it was badly crushed. The injury was so extensive that at the time of admission it was a proper case for amputation. The shock of the injury, however, was so great that it rendered the man's general condition entirely unfit to endure the additional shock of an operation. Had the part been amputated then, it would, in all probability, have placed the man beyond a possible recovery. His chances for life were few, but after consulting with the other surgeons of the house, I decided to give the man the only chance he had, by allowing the parts to remain as they were, and perform, if necessary, a secondary operation. The man's general condition was carefully watched and cared for, but the injured joint was simply given comfortable support and let alone. This was all that could be done in such a case as this.

Upon this plan of treatment, which was more expectant than anything else, the man's condition gradually improved. His countenance slowly brightened up, and he became more cheerful. His temperature, though varying considerably at different times, as shown by the zig-zag oscillations upon the chart, has not, however, at any time been above 102° Fahr. The arm itself is doing fairly, and altogether the general condition is quite favorable.

Inasmuch as there is considerable raw surface exposed about the elbow, the ordinary carbolized dressings are applied. A piece of patent lint is saturated in carbolized oil and laid over the parts.

The carbolized oil which is used so much in this house is composed of twelve parts of castor oil to one part of pure carbolic acid. Formerly it was made of the strength of sixteen parts of the oil to one of acid, but the stronger preparation very seldom irritates, and has proven itself the best for ordinary purposes. Other oils are sometimes used for this purpose. Linseed oil answers very well. It is not as good as castor oil, but is much better and cheaper than olive. Olive oil is itself more or less irritating, and hence inferior to either of the others just mentioned.

## EDITORIAL DEPARTMENT.

### PERISCOPE.

#### The Therapeutic Uses of Belladonna, Especially in Erythematous Fevers.

Dr. Wm. Hitchman writes to the *British Medical Journal*—

Nearly forty years since I was much struck by Mr. Liston's successful treatment of erysipelas by means of belladonna exclusively. From that time to the present I have largely prescribed this valuable therapeutic agent, not only in intestinal obstruction, after the failure of other

measures, but in smallpox, diphtheria, whooping cough, typhoid fever, scarlatina, and acute inflammatory diseases. In spasmodic nervous affections, such as epilepsy, chorea, and infantile convulsions, it acts benignly upon the heart, brain, spinal cord, alimentary canal; demonstrably increasing (particularly in scrofulous and phthisical subjects) the contracting power of the intestines; relieving constipation, headache, sore throat, cerebral excitement, and cardiac disturbance, very efficiently. In availing ourselves of the therapeutic advantages of belladonna, it is not desirable or necessary to include its toxic action.



I have attended hundreds of cases of smallpox in Liverpool alone, during the past quarter of a century, without a single fatal issue; and I attribute the fact entirely to the remedial influence of the medicine in question, since, as Dr. J. Harley has clearly shown (*Old Vegetable Neurotics*), and I had also observed, that it is practicable to dissociate the eruptive fever from local inflammation to such an extent that it can be arrested independently; and on the removal of the former the latter subsides. In my opinion there really is a similarity or correspondence between the primary action of belladonna on the capillary vessels and sympathetic nerve and those peculiar morbid states conventionally known as fever and inflammation. I have suggested to several professors in France, Germany, Holland, and Italy, the value of atropia in smallpox, all of whom have obligingly communicated to me their high opinion of its therapeutic value. That the stimulant action of belladonna is converted, in febrile diseases, into a tonic and sedative influence, favorable to recovery, may well be conceived, seeing that if we give (as Dr. J. Harley points out) a full dose of atropia to a patient with a pulse of 120, and even higher—a hard, dry tongue, and pupils measuring one-sixth—after ten, twenty or thirty minutes, when the action of belladonna is fully developed, the pulse will be decreased, the tongue be moist, the pupils contracted, etc. In fact, the medicine, when appropriately given, neutralizes the disease, and no morbid remedial augmentation, however temporary, is usually witnessed, unless the doses have been unnecessarily, and therefore injuriously, large.

#### Morbid Softness of the Uterus.

On this state Dr. Graily Hewitt writes, in a recent clinical lecture, in the *Lancet*—

I regard this condition of the uterus as of the greatest importance as a factor in the production of severe and troublesome disease. It results, from many observations which I have been able to make, extending now over a considerable period, that one of the effects produced by chronic starvation is a peculiar softening and relaxation of the tissues of the uterus, whereby the organ loses its normal, hard, firm, resisting composition, and becomes soft, non-resisting, pliable, and thus physically changed in certain very important particulars. The condition in question is so constantly associated with an imperfectly nourished state of the body generally, that the constant association of the two elements, in cases coming under my notice, first led me to decidedly connect the two as cause and effect, a connection the knowledge of which has proved most serviceable to me in the treatment of this class of cases. Undue softness of the uterus plays a most important part in the history of flexions of the uterus, and it is my opinion that it constitutes the principal predisposing cause of this troublesome class of diseases. Undue softness of the uterus in single women is, I believe, always associated with defective nutrition. This is the class of cases in which severe reflex uterine nausea is liable to be observed; nausea, dysmenorrhœa and undue softness of the uterus are also frequently associated.

Concerning the condition of the uterus in married women who are the subjects of chronic starvation, I would remark that the same softness and undue pliability is liable to be met with as the result of chronic starvation. But pregnancy also has the effect of softening the uterus, or, at all events, that portion of it which is accessible to the touch. Moreover, after pregnancy is over the softness peculiar to pregnancy is liable to persist for a variable interval. The uterus after childbirth undergoes a process known as involution. This process is singularly disturbed in cases of chronic starvation. It is protracted, delayed, and in other ways seriously affected, in many cases where the general nutrition is in an imperfect state. In other words, in women who are suffering from chronic starvation we find the uterus is very slow in returning to its original size and weight after the process of parturition is at an end.

Pregnancy is frequently a cause of chronic starvation, in consequence of the sometimes long continued nausea and vomiting attending the first part of the process. It is well known that this evil is occasionally carried to such a length that the patient does actually perish of starvation. In these cases, which are quite analogous to those just now mentioned as occurring in non-pregnant women, the uterine irritation sets up the reflex act, vomiting, and so little nourishment passes into the system that chronic, and sometimes acute, starvation results.

#### Treatment of Diphtheria.

Dr. C. S. Kilner writes to the *Lancet*—

That the use of iron is one of the best remedies in this disease, and in many other affections of the throat, is, I think, now almost universally received. A powerful antiseptic, without its being too corrosive in its action, is what is required as a local application in diphtheria.

I have found the following course of treatment to be very beneficial: On the first appearance of any signs of diphtheria I immediately order the throat to be thoroughly swabbed with a paint composed of carbolic acid, one drachm; sulphurous acid, three drachms; solution of the perchloride of iron and glycerine, of each half an ounce. Internally I give iron in large doses, with chlorate of potash and spirits of chloroform, every three hours. I also order plenty of beef tea, port wine, etc., from the commencement.

During the past week I have had two cases under my care. In one I saw a well-marked diphtheritic patch on the right tonsil at the commencement of the attack. I used the paint as described above, and the disease was checked at once. In the other the disease had spread over the greater part of the fauces and back of the pharynx, and by night the throat was almost blocked up. In this case I used the paint frequently, and by the fourth day the exudations had disappeared. I may add that in every case in which I have adopted this plan of treatment the patients have experienced great relief after each application of the paint.

The following case is reported in the *British Medical Journal*, by Dr. J. P. Lewis:—

On October 13th I was called to see Master

— (one of a family of four children), whom I found suffering from a diphtheritic patch on the left tonsil, accompanied by the usual prostration of strength, a temperature of 108°, and a pulse of 180. I had here a case of diphtheria in a household of ten persons. Isolation, as far as possible, was at once enjoined, and the treatment which I have with unvarying success pursued for many years was adopted; the main features of which are: the application of *sulphurous acid* to the throat, nitro-hydrochloric acid internally, and as large a quantity of nourishment as possible, given assiduously, day and night, with alcoholic stimulants according to circumstances. One nurse and the three remaining children were received into the house of friends in a neighboring village, whose courage and humanity deserve to be recorded; but, on October 20th one of these children developed diphtheria and was brought back to his home. The under nurse maid, who had remained in the infected house, fell ill on the same day, and there the spread of the disease ended.

In the first case, which was also the most severe, the maternal instincts were too strong to be influenced by my protests; notwithstanding which the mother, a delicate lady, nursed the child throughout his illness (with occasional assistance), without showing a symptom of the disease, an immunity she shared with the others in attendance. Now, the point I desire to make specially prominent is, that all those attending on the cases were considered for the time being as also affected, and treated with *sulphurous acid gargle*, etc., accordingly. To this prophylactic treatment I attribute their immunity from attack, as the specific fungoid growth found on the throats of the diphtheritic must necessarily be nipped in the bud by the action of the acid, so destructive to this form of life.

#### Creasote as a Disinfectant.

Dr. F. Vacher writes to the *British Medical Journal*: About two years since, owing possibly to my having heard current stories of the curative properties of the waste gases and vapors given off at gas works, in cases of croup, whooping cough, etc., I directed my druggist to prepare for me a disinfecting liquid, made as follows:—

R. Creasote,		
Glacial acetic acid,	aa	3iiss
Methylated spirit,		3x
Water,		Cj. M.

This has since been used by the Birkenhead inspectors as an ordinary disinfecting wash, for cleansing the interior of cottages in which the subjects of zymotic disease are or have been housed. The preparation, it will be seen, is very similar to *mistura creasoti* of the *British Pharmacopœia*. It is, I believe, quite as efficient as carbolic acid and water, and the smell is certainly less objectionable. Indeed, the great merit of creasote wash is that it can be abundantly used in a sick room without nauseating the patient, while the acetic acid it contains is felt to be cooling and refreshing, and helps to neutralize the ammoniacal vapors that hang about the chambers of the poor.

## REVIEWS AND BOOK NOTICES.

### NOTES ON CURRENT MEDICAL LITERATURE.

—Mr. D. C. Robbins' annual report of the drug trade of New York city contains many facts of interest.

—An obituary notice of the late Dr. L. R. Longworth, of Cincinnati, by Dr. F. Forchheimer, has been printed in pamphlet form.

—The *Transactions* of the American Dermatological Association at its second meeting form a neat pamphlet of 62 pages. (D. Appleton & Co., New York.)

—A Manual and Directory of the Charities of Philadelphia has been published by J. B. Lippincott & Co. It forms a small volume of 217 pages, and will be found very useful to all residents in the city.

—The very considerable adulteration of food and medicine has prompted Dr. E. R. Squibb, of Brooklyn, to advocate legislation to diminish it. A pamphlet on the subject, of 58 pages, from his pen, has been published by G. P. Putnam's Sons, New York.

—The *Transactions* of the Kentucky State Medical Society, April, 1878, are comprised in 44 pages, principally occupied with the address of the President, Dr. J. L. Desmues, and an address on the late Dr. L. P. Yandell, by Dr. R. O. Cowling, of Louisville.

—Part II of Mr. R. J. Godlee's Atlas of Human Anatomy is now ready. The plates represent dissections, showing the structures at the back of the neck; another, exhibiting the superficial parts supplied by the branches of the external carotid; and a third, displaying the deep carotid and its region. These plates are exquisitely drawn and colored, and the explanatory text which accompanies them is full and clear. The work is to be completed in twelve or thirteen parts, at \$2.50 a part. Published by Lindsay & Blakiston, Philadelphia.

—Of recent contributions to the department of nervous diseases, the essay by Dr. William A. Hammond, on the "Non-Asylum Treatment of the Insane," is particularly noteworthy, as an effort to release this specialty from the too exclusive control of a narrow class of practitioners. (G. P. Putnam's Sons.) The Nature and Diagnosis of Neurasthenia are discussed with much ability by Dr. George M. Beard, in a reprint from the *New York Medical Journal*. The difficult subject of the pathology of the sympathetic nerve is explained, with special reference to dis-

eases of the eye, by Dr. Landesberg, of Philadelphia. (Reprint from the *Archives of Ophthalmology*, vol. vii.)

### BOOK NOTICES.

**A Manual of Examination of the Eyes. A Course of lectures delivered at the "École Pratique" by Dr. E. Landolt, Directeur Adjoint of the Ophthalmological Laboratory at the Sorbonne, Paris. Translated by Swan M. Burnett, M.D., etc. Revised and enlarged by the Author. Published by D. G. Brinton, Philadelphia, 115 South 7th St., 1879. 1 vol., 8vo. Illustrated. pp. 307. Price, cloth, \$3.00.**

There can be no doubt of the fact that diseases of the eye have materially increased in frequency within the last generation. The reasons are obvious in the forms of modern civilization; and a consequence is that every physician now finds it a duty, and should not neglect it, to acquaint himself sufficiently with the difficult specialty to be able to use the ophthalmoscope, and to recognize, at least, if he does not treat, the various impairments of vision now-a-days so common.

It was largely with this object in view, that is, to write a clear, comprehensive, accurate manual of ophthalmological diagnosis, that Dr. Landolt prepared his lectures at the clinical school of the Sorbonne for publication in book form. He has called upon all the resources of his art to measure, exhibit and test the visual organ and its function; and supported as he is by a very able translator, his work leaves nothing to be desired, either by the specialist or the general practitioner.

In his earlier chapters he considers the movements of the eyes, and the uses of prisms; then follow the subjects of asthenopia and tonometry, refraction, astigmatism, ametropia, accommodation and the influence of age on it, the tests of acuteness of vision, examination for color blindness and color perception, indirect vision, and finally, eight chapters on ophthalmoscopy, treating this subject in the most complete manner, and describing the very latest improvements of the ophthalmoscope and their uses. Two charts conclude the book, printed on large sheets, the one on the movements of the eyes, and their derangements, the other on paralysis of the muscles of the eyes. The illustrations, which are numerous, were made under Landolt's own inspection, in Paris, and imported especially for the publication of this work.

Dr. Burnett, himself favorably known as a practitioner of skill in this special branch, has done the work of translation with much judg-

ment, and has combined in this volume the contents of several of the author's original essays. As the author, however, read and corrected the translation before it went to press, the reader may be sure of finding his latest and most mature views.

**A Treatise on Gout, Rheumatism, and the Allied Affections. By Peter Hood, M.D., etc. Second Edition. Lindsay & Blakiston, 1879. Cloth, 8vo. Price \$3.50.**

Dr. Hood's work, originally published in 1871, has attained a moderate popularity. It was drawn from a large practice, by a provincial English physician of good education and thoughtful mind. Gout occupies his chief attention. Eight chapters are devoted to its description, causes, treatment and prevention; while rheumatism is discussed in one chapter. The revision has been careful, and we have not noted the omission of any of the important new discoveries in treatment.

This edition has a final chapter on Longevity, not connected with the substance of the book. It is interesting reading, as all treatises on that subject are. The principal cause of failure to attain long life is, in the author's opinion, a neglect of the incipient signs of disease. Another is the sloth which creeps over old people. We are surprised to see the author state (p. 410) that Quakers are a short-lived sect. Recent statistics prove the contrary.

**A Clinical Treatise on Diseases of the Liver. By Dr. F. T. Frerichs, etc. In three volumes. Vol. I. Translated by Charles Murchison, M.D., F.R.C.P., etc. New York, Wm. Wood & Co., 1879.**

It has now been twenty-one years since this monograph of Frerichs' was published, and it is still respected as one of the best works on the subject in medical literature. Hardly any point in physiology has been more warmly debated within that period than the function of the liver; and very constant study of its pathology has been prosecuted by hosts of observers. Not very much has, however, been added to Frerichs' observations, so far as the practical part of the matter is concerned. His acute observation defined the signs of disease, and the explanations he offers for them are generally as plausible as any since suggested.

The present volume is chiefly occupied with jaundice, acholia, chronic atrophy and fatty liver. The translation (made in 1860) is by a master hand, and the notes of the translator add value to the original text.

THE  
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D. G. BRINTON, M.D., EDITOR.

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**PETROLEUM AND ITS DERIVATIVES, IN  
 PHARMACY AND MEDICINE.**

Petroleum was once known as "Seneca oil;" and the reason given for this name was that the Seneca tribe of Indians, who occupied the territory where it was a natural product, were accustomed to collect and use it for medicinal purposes, and sell it to other tribes as a valuable agent. Just how they employed it, whether internally as well as externally, we do not now recall; but that their esteem of it was well founded we do not doubt.

We still lack a careful study of the physiological effects of crude petroleum and its numerous derivatives. These latter are found in both the gaseous, the liquid, the semi-solid and the solid state. They all belong to various series of carbon-hydrogens, and the absence of oxygen renders them suitable for a variety of economic and therapeutic purposes.

French writers have recently reported some interesting facts, worthy of reproduction. In the number of the *Bulletin de Therapeutique* for De-

cember 15, Dr. BLACHE states that a refiner of petroleum having been prohibited by a préfet, at the request of some *pharmaciens*, the distribution of petroleum in medicinal doses, this led to an inquiry being made as to its alleged utility in affections of the chest. The native petroleum from Pennsylvania and Virginia was that experimented upon first. It is a very safe substance, for even large quantities, when drunk by error, have only caused a little nausea. In chronic bronchitis, with abundant expectoration, it rapidly diminishes the amount of the secretion and the paroxysms of coughing, and in simple bronchitis rapid amelioration has been obtained. Its employment in phthisis has been continued for too short a time, as yet, to allow of any opinion being delivered as to its efficacy, beyond that it diminishes the expectoration, which also loses its purulent character. The petroleum is popularly taken in doses of a teaspoonful before each meal, and after the first day any nausea which it may excite in some persons disappears. M. Gardy, a Paris *pharmacien*, has prepared capsules, each containing twenty-five centigrams of petroleum, or, as he calls it, *huile de Gabion*, from the name of an ancient petroleum spring, and this Dr. BLACHE considers as the most favorable mode of administering it.

The physiological effects of benzine have lately been discussed by Dr. BENECH, in the *Gazette Médicale de Paris*. He remarks, that since the days of Sir J. Simpson benzine has been considered by Kopp, Lebert and others, as an anæsthetic. Dragendorff maintained that benzine is not a poison; while Raynal said, as early as 1854, that it has toxic effects on large animals. When injected under the skin, benzine is not absorbed; and animals survive almost enormous doses of it when given by the mouth. But if it be inhaled, or injected into the veins, symptoms of poisoning are produced, the animal having clonic spasms and muscular trembling; all voluntary movements cease; the animal cannot stand upright; its movements are, at first, coördinated; this period soon ceases, the temperature falls, both the respiration and rhythmic action of the heart are quickened, and



the animal dies. If the dose of benzine have not been large enough to cause death, the animal recovers gradually, and after a few intermittent attacks of clonic convulsions the temperature rises, the animal succeeds in standing upright, and normal recovery gradually follows.

M. BENECH concludes that, on the whole, benzine increases the secretions of the body, modifying them in various ways. Diabetes is caused by it in the guinea pig, rarely in the rabbit, seldom in the dog. It is eliminated by respiration. Professor NAUNYN, of Berlin, states that it is transformed into carbolic acid in the body; but M. BENECH has never succeeded in discovering carbolic acid either in the urine or in the blood of animals poisoned by benzine. It seems that animals become accustomed to it very quickly; they will, without seeming to suffer much, bear doses short of poisonous for a long time.

Kerosene has long been popular in the United States as a remedial agent. It is given in croup, in doses of a teaspoonful to a child two years old (see REPORTER, volume XXXVI, pages 343, 409); and is also used as a cough remedy. While thus seemingly innocuous to large animals, it is fatal to small ones. As a parasiticide and vermin destroyer it is one of the best and cheapest in existence, sharing this property with benzine, benzoline and other petroleum products. It is an efficient destroyer of moths and lice, and we note that the Austrian Government has adopted, in its military establishments, the use of benzine as a vermin killer, and finds this process quicker and more effective than the old method of baking.

The semi-solid products, known as petroleum ointments, have been extensively introduced into medicine under fanciful names, as cosmoline, vaseline, petroleol, etc. They are all various mixtures of paraffins, being saturated hydrocarbons, some inclining to the solid, others to the volatile members of the series, and differing in density according to the character of the mixture. They are obtained commercially by distilling and filtering the American petroleum, which consists almost exclusively, when in its natural state, of

paraffins, varying in density from ethane and propane, gases given off from it at ordinary temperatures, to ozokerit, which is a very firm solid.

These ointments, when carefully made, are almost tasteless and inodorous, insoluble in water, freely so in ether, and when warmed, miscible in all proportions, with fixed and volatile oils. They resist the action of oxygen, and hence undergo no change by exposure to the air, warmth and moisture. They never become rancid, and, in fact, are wholly unalterable under any of the ordinary conditions of life. Applied to the denuded flesh they are soothing and protective, and mechanically assist the healing process. They are inimical to the lower forms of animal and vegetable life, and are thus mechanical antiseptics of considerable efficacy. We look forward confidently to their ultimately wholly banishing from pharmacy the use of all other vehicles for ointments, and to a large extent the use of vegetable and animal oils, glycerine, lard, cerate and wax in any capacity.

## NOTES AND COMMENTS.

### Therapeutical Notes.

#### BROMINE IN CROUP.

The inhalation of the vapor of bromine in croup is not a novelty. But Dr. Redenbacher gives, in the *Med. Central Zeitung*, the following formula as one especially appropriate for internal use:—

R.	Decokt. althææ,	120.0	
	Potassii bromidi,	4.0	
	Brominii,	0.3	
	Syrupi simplicis,	30.0	M.

Sig.—A dessertspoonful every hour, to a child of seven.

The effect he describes as surprisingly good.

#### ATOMIZED ETHER IN PERTUSSIS.

Dr. Lubolski, in the *Gazette Hebdomadaire*, recommends, in the first two stadia of pertussis, atomized ether, applied to the neck and along the course of the pneumogastric nerve. He claims it is without danger, and gives prompt relief. Ether inhalations, we may add, were long since recommended in this disease (see Cohen, *Inhalation*, page 122).

#### REMEDY FOR COLOR BLINDNESS.

*La France Médicale* states that M. Delbœuf

has found that if a person afflicted with Daltonism looks through a layer of fuchsine in solution his infirmity disappears. A practical application of this discovery has been made by M. Joval, by interposing between two glasses a thin layer of gelatin previously tinted with fuchsine. By regarding objects through such a medium, all the difficulties of color blindness are said to be corrected.

#### CANTHARIDINE IN NÆVI.

Dr. Laboulbène has utilized the irritant properties of cantharidine for removing nævi, which disappear under its use, without leaving any traces beyond a slight scar. He mixes ten centigrams of cantharidine with ten grams of chloroform, and paints it on the skin.

#### A NEW HAIR RESTORATIVE.

A writer in the *Berlin Klin. Woch.* tells of a bald old man who, for an eye affection, had pilocarpine mur. injected hypodermically thrice within a fortnight. The treatment proved successful, not only for the eyes, but also for the hair, which suddenly began to grow rapidly. A few weeks later the author had to treat another patient with pilocarpine, who also had a bald patch. After two or three injections, the patch was covered with young hairs, which grew rapidly.

#### NAPHTHALINE IN CATARRH.

Naphthaline,  $C_{10}H_8$ , reduced to powder and united with a little gum acacia, in gr.j-ij, or advantageously combined with a small quantity of codeia, not only slightly lessens expectoration, but alleviates cough without interfering with the other secretions; at any rate, when given, it has acted well in my hands. It appears to be a stimulant expectorant, possibly having more advantage from the slight disinfectant power it may possess.

#### Simulation of Pleuritic Signs by Worms.

A number of striking cases are collected by Prof. Wiart, of Paris, in an article in *l'Année Médicale*, illustrating the deceptive signs of pleurisy and other respiratory affections occasionally brought about by the presence of worms in the intestinal canal. There is a dry and frequent cough, and sharp pain, generally in the right side, sometimes nearly as high as the shoulder. Dyspnoea, orthopnoea and other functional derangements may be present. The attacks may be sudden and repeated, or gradual and constant. He quotes Dr. M. de Grandvilliers as giving a pathognomonic sign of worms; it is a transitory flush of one cheek (*une rougeur fugace à une des*

*joues*). Whenever this is not a symptom of dentition, it is sure to indicate intestinal worms.

#### Morphia in Labor Pains.

Dr. Ernoul, in the *Bulletin de Thérapeutique*, observes that hypodermic injections of morphia act most efficaciously in the relief of even the most violent after-pains; and they also diminish the pains of labor when these are excessive, and especially when produced in primiparæ by prolonged distention of the perineum. To relieve these it is only necessary to inject into the perineum one centigramme of the hydrochlorate of morphia. The uterine contractions are not sensibly diminished, but only less painful. These injections, however, should not be used in women predisposed to hemorrhage.

#### Diphtheria in Fowls.

The *Gazette des Hôpitaux* states the following results of Mr. Nicati's experiments on diphtheria in fowls: 1. This disease can be transmitted from the chicken to any other being. 2. It can be inoculated into the eye of an individual who has already been attacked by the same disease. 3. The further development of diphtheria can, if not suppressed, at least be retarded by protecting the affected part from the air, the diphtheritic process being entirely dependent on air or oxygen.

#### Treatment of the Albuminuria of Pregnancy by Jaborandi.

Dr. Langlet, of Rheims, publishes an account of a case of albuminuria during pregnancy, which he has treated successfully by the administration of jaborandi. The patient, three months advanced in pregnancy, showed the ordinary symptoms of albuminuria. The action of the jaborandi on the salivary glands became apparent on the day of administration. The patient took the drug continuously for a period of sixteen days, during which time the oedema disappeared, and the general symptoms were improved.

#### Spontaneous Cephalæmatomata.

M. Gidon reports two cases of the spontaneous origin of these blood tumors in infants about 20 months of age. There was no fall nor blow, and in both instances no serious results followed (*l'Année Médicale*, January, 1879). The observations are interesting, as the fact of the spontaneous origin of such tumors will often acquit nurses and companions of alleged violence and negligence, which might unjustly be imputed to them.

## CORRESPONDENCE.

## Purpura Hemorrhagica Equina.

ED. MED. AND SURG. REPORTER:—

In an experience of over twenty years' active practice as a veterinarian in this city, I have seen a great many cases of purpura hemorrhagica, and some years ago, judging by the number of deaths that came under my notice, as well as the various names the disease was known by, such as farcy, dropsy, water farcy, swelled legs, etc., I concluded that the disease was not understood by the majority of the men who were practicing as veterinary surgeons, and wishing to save the lives of valuable animals—as there were many cases came under my notice that had been condemned as being affected with farcy—I gave a brief description of the symptoms and treatment of the disease to the *Evening Bulletin*; the same was published in that journal, in the issue of November 26th, 1872, and I was pleased to find that it was the means of saving the lives of many valuable animals that would have been destroyed as being affected with farcy. I thought then, as I think now, that the pathology of the disease was and is understood by veterinarians, and my object in sending the article to the paper was to try and prevent amateurs and quacks from condemning valuable horses; and, as I remarked above, it had in many cases the desired effect. Therefore, you can judge of my surprise, on looking over the MEDICAL AND SURGICAL REPORTER for March 1st, to find that in your answer to Dr. H. K., of La., you say that purpura hemorrhagica in the horse is a misnomer; it is not purpura at all, but a form of typhus. As I have been a constant reader of your very valuable journal, and have heretofore accepted your views, and believing that many human practitioners, as well as veterinarians, would accept, without questioning, any theory you might advance, I feel called upon, knowing that you are always ready and willing to advance the veterinary art, to ask you on what authority you base your opinion? Is it from theory, or actual practice? If the former, is the theory advanced by a human or veterinary practitioner? and if the latter, did you make post-mortem examinations in cases that terminated fatally? I hope you will give this space in the MEDICAL AND SURGICAL REPORTER, with your answer, so as to elicit the views of others on the subject.

JAMES MCCOART, V.S.

317 N. 22d St., Phila.

[Our opinion given on this subject may be supported by the authority of Prof. John Gamgee, who writes: "I have, since I commenced lecturing on Veterinary Medicine, insisted on the term purpura being quite misapplied to the disease so named by veterinarians." (*Veterinarians' Vade Mecum*, p. 311.) Prof. W. Williams identifies it with "septic or carbonous fever" (*Principles and Practice of Veterinary Medicine*, p. 269), which, it is needless to add, is a very different disease from purpura hemorrhagica in man.—ED. REPORTER.]

## Puerperal Convulsions.

ED. MED. AND SURG. REPORTER:—

February 23d, 1879, at four P.M., saw Harriet Leverett; colored, primipara, aged eighteen; had been in active convulsions, with but little interval, at least six hours. At sunrise she was heard to groan. On being questioned, replied that nothing was the matter. At ten A.M. was found in convulsions, with a dead babe in the bed, having in some way cleared herself and removed the afterbirth. I injected, at once, hypodermically, one-half grain morphine and twelve drops of fluid extract veratrum viride. I corded the arm, and bled from two veins at once till convulsions ceased for the time, and she could bear no further loss of blood. Ordered, at nine P.M., and every three hours till convulsions ceased—

R. Potassii bromid.,	grs. cccxx
Morphiæ sulphat.,	gr. ij
Fld. ext. verat. virid.,	℥j
“ ergot,	f. ʒ iv
Aquæ,	q. s. f. ʒ viij. M.

Sig.—Tablespoonful every three hours.

Her employer, a very intelligent man, was instructed, if convulsions became violent and more frequent again, to remove the bandage and let her bleed all she could bear. This was not necessary, as the convulsions grew lighter, came at longer intervals, and entirely ceased at six P.M. on the 24th. She from this time improved steadily, and on the morning of February 28th was aroused for the first time to complete consciousness, and went on, without a break, to recovery. This case is reported simply as illustrating a treatment adapted to the relief afforded in a girl of plethoric and vigorous habit, of a race that, as a rule, bears depletion badly in any ordinary disease.

EDWARD H. SCHOLL, M.D.

Gainesville Ala., March 18th, 1879.

## A Twin Labor, with Breech and Shoulder Presentation.

ED. MED. AND SURG. REPORTER:—

Two weeks since the writer was called to attend Mrs. W.; white, multipara, last child born six years since; this the succeeding pregnancy. Examination revealed os well dilated, and the labor rapidly progressing. In an hour or two the first child was delivered by the breech, and with considerable trouble was severed from the mother, the cause unusual shortness of the cord. Looking immediately after the placenta, the second child was detected rapidly advancing, urged by pains of considerable force. The presenting part was well down in the pelvis, and discovered to be the left shoulder; the waters had ruptured, and the cord had presented. The first impulse was to turn and deliver by the feet. But changing my tactics, the shoulder was, in the interval of a pain, carried well back, the fingers then swept upward, forward and to the mother's right, and the head brought into the strait, where a few pains soon secured it. The head, it seems, had delivered down occipito

anterior, and being by some means displaced, was carried to the right, along the brim, while the left shoulder assumed its original position. The child was delivered vertex to front. The cord, though replaced, in all probability was constricted, for the child was stillborn, and never revived. There was one placenta and two sacs. The children would probably weigh six pounds each, and to all appearances, were delivered at about seven and a half or eight months, this term agreeing with the mother's count.

The case is reported merely to suggest more thorough attempts at cephalic version before resorting to podalic, a plan more tedious, difficult and painful than the above, wherever the writer has attempted it. M. J. ELEY, M.D.

Lafayette, Ala., March 20th, 1879.

#### Venercal Warts.

ED. MED. AND SURG. REPORTER:—

In the REPORTER for March 29th I notice that a writer in the *British Medical Journal* recommends burnt alum and tannin in the treatment of venereal warts. In one case I used acetic acid for this purpose, and with complete success. The warts were situated in the angle between the prepuce and glans, and together formed a bunch about the size of a hazel nut. The acid was applied twice a day, with a camel's hair pencil, and the parts kept covered with soft cotton. In four or five days the warts had entirely disappeared. The points from which they sprung were touched with acid nitrate of mercury, and the cure was complete.

F. H. MURDOCK, M.D.

Bradford, Pa.

### NEWS AND MISCELLANY.

#### The Medical Law of Indiana.

The following is the Medical Law of Indiana, as passed by both houses last month:—

SECTION 1. Be it enacted by the General Assembly of the State of Indiana, That any person who shall have attended two full courses of lectures, of sixteen weeks each, and graduated in some legally chartered medical college, shall be entitled to practice medicine, midwifery and surgery in the State of Indiana, subject to the hereinafter mentioned provisions of this Act. It shall be the duty of all legally chartered medical colleges to have appointed from the State Medical Association of the same school of practice to which such college belongs a board of examiners, composed of five members, to be appointed by said State Medical Association, whose duty it shall be to examine all candidates for graduation, and upon a certificate from such board of examiners that the candidate has passed a satisfactory examination shall a diploma be issued by such faculty or college, and upon no other, and such colleges shall be required to pay a fee of five dollars to such board of examiners for every such student so examined, and no other or further remuneration shall be allowed such board of examiners for their services.

SEC. 2. That any person who shall have practiced medicine, midwifery and surgery for the last preceding five years consecutively, within the State of Indiana, and attended one full course of lectures of sixteen weeks, and graduated in some legally chartered medical college, shall be entitled to practice medicine, midwifery and surgery, subject to the hereinafter mentioned provisions of this Act.

SEC. 3. Any person who shall have practiced medicine, midwifery and surgery for the last preceding ten years consecutively, within the State of Indiana, shall be entitled to practice medicine, midwifery and surgery, subject to the hereinafter mentioned provisions of this Act.

SEC. 4. That any person desiring to practice medicine, midwifery or surgery in any county in the State of Indiana, and who is a graduate of medicine, midwifery and surgery, in accordance with the provisions of this Act, shall go before the clerk of the Circuit Court in the county in which he desires to practice, and present his diploma in accordance with the provisions of this Act, and there make oath that he is the person mentioned in said diploma, and that the same has been properly and legally obtained.

SEC. 5. Any person desiring to practice medicine, midwifery and surgery in any county in the State of Indiana, and who shall have practiced the same for the last preceding ten years consecutively within the State of Indiana, shall go before the clerk of the Circuit Court in the county in which he desires to practice, and there make oath that he has practiced medicine, midwifery and surgery within the State of Indiana for the last preceding ten years consecutively, and prove the same by two reputable witnesses, who shall also be required to make oath to the same effect. *Provided*, that nothing contained in this Act shall be so construed as to prohibit any person complying with the foregoing provisions of this Act to practice medicine, midwifery and surgery in any other place than where he resides.

SEC. 6. The clerk of the Circuit Court in any county in the State of Indiana shall, on the payment of \$1, issue his certificate, stamped with the seal of the county, to any person complying with the provisions of this Act.

SEC. 7. The clerks of the Circuit Court in the counties in the State of Indiana shall be required to keep a register of all persons complying with the provisions of this Act.

SEC. 8. Any person practicing medicine, midwifery and surgery, in accordance with the provisions of this Act, shall, on removal to another county, be required to file his certificate, obtained in accordance with the provisions of this Act, with, and pay one dollar to, the clerk of the Circuit Court in the county to which he removes, and said clerk shall issue his certificate in lieu thereof, which certificate shall be his warrant for practicing in said county.

SEC. 9. The clerk's certificate shall be as follows: "Dr. A. B., having complied with the provisions of the law passed —, 1879, governing the practice of medicine, midwifery and surgery, is hereby authorized to practice medicine, midwifery and surgery in this county and State, so long as he resides in this county."

SEC. 10. Any person practicing or attempting



to practice medicine, midwifery or surgery in violation of the provisions of this Act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be imprisoned in the county jail for not less than six months nor more than twelve months, and fined in any sum not less than twenty-five nor more than five hundred dollars, in the discretion of the court.

SEC. 11. Any person making false oath or affirmation, to obtain a certificate in accordance with the provisions of this Act, shall be deemed guilty of willful and corrupt perjury, and upon conviction thereof shall be subject to the pains and penalties attached to such crime by the laws of the State of Indiana.

SEC. 12. Any clerk of any Circuit Court in the State of Indiana who shall issue a certificate to any person to practice medicine, midwifery and surgery, who shall not have complied with the foregoing provisions of this Act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be imprisoned in the county jail not less than ten days nor more than six months, and fined in any sum not less than ten dollars nor more than one hundred dollars, in the discretion of the court.

SEC. 13. Whereas there is an emergency existing for the immediate taking effect of this Act, therefore, the same shall be in force from and after its passage.

#### The Late Dr. G. B. Wood.

Resolutions of respect have been passed in reference to the death of this eminent physician, by the various learned bodies to which he belonged. From those of the College of Physicians we extract the following, relating to his intellectual and personal character:—

\* \* \* "He was not only a memorable example of high moral worth and refinement, but also of patient, persevering and well-directed industry. His mental characteristic was not genius, properly so-called; but he possessed capacity of a high order, and had a methodical and mechanical mind, a striking feature of which was its strong, masculine common sense. With this was united the greatest, perhaps, of all talents, steady and unwearied application. It is no doubt true that the man is yet unborn who duly weighs an hour, but Dr. Wood made a much nearer approach to that estimate than is done by most others; diligently improving the fleeting moment, 'having wisdom with each studious year,' and always seeking to benefit mankind by lessening the sum of human suffering and increasing the resources and extent of professional skill. It was a rule of his life, not only to be always busily employed, but to be always usefully so.

Resolved, That these and many other attributes of person, heart and mind made him emphatically a representative man—one to whom all willingly accorded primacy of merit and position, with fullest confidence in his rectitude, wisdom, knowledge, zeal and ability. He was an able, ready, dignified and impartial presiding officer, both of the College and other bodies; a skillful and sagacious physician; a learned professor; an eloquent and instructive lecturer; an eminent author, whose works have contributed greatly to the advancement of medical science; a munificent patron of the profession which he loved; a wise and prudent counsellor; and, withal, a warm and unwavering friend. Seldom has there been found in one person such an assemblage of qualities, fitting their possessor to be a leader of men, and causing him to be regarded *ante alios omnes præstantissimus*."

Dr. Wood's will contains provision for a bequest of \$75,000 to the University Hospital, on condition that the managers of the hospital shall provide and maintain a special ward, to be called

the "Peter Hahn ward," in memory of Dr. Wood's father-in-law.

#### National Board of Health Organized.

The first regular meeting of the National Board of Health was held at the State Department, Washington, April 2d. All the members were present, except Dr. Bowditch, of Boston. A permanent organization was effected by the election of a President, Vice-President, and a Secretary. Dr. James L. Cabell, of Virginia, was chosen President; Surgeon John S. Billings, U. S. A., vice-President, and Medical Director Thomas J. Turner, U. S. N., Secretary. An executive committee was elected, as follows: Dr. Cabell, Surgeon Billings, Medical Director Turner, Dr. Stephen Smith, of New York, and Surgeon P. H. Bailhache, of the Marine Hospital. Rules and regulations for governing their meetings were then adopted, and the meeting adjourned.

#### Yellow Fever Threatenings.

A correspondent of a New York daily, writing from Mississippi, states that a return of the yellow fever the coming summer is generally expected. He says that in Vicksburg there have been sporadic cases of the fever all winter; that nothing whatever has been done to improve the sanitary condition of that city, and that already people are beginning to take the alarm and to make preparations to flee from the place. If this is true, what right will the citizens of that city have to appeal for aid next summer?

#### Homœopathic Statistics.

The reckless disregard of truth, or else the profound ignorance, of homœopathic writers, may be judged from some statistics in a late pamphlet on diphtheria, by Dr. Wm. Morgan, a homœopathist, of London. We find it there stated that in diphtheria 70 per cent. die under allopathic treatment, while 15 per cent. succumb under homœopathic treatment. In yellow fever the proportions are 65 and 3 per cent. respectively; in smallpox 24 and 8 per cent. respectively, and so on.

These bald assertions are made without an effort to prove them.

#### Pharmaceutical Novelties—Rubber Plasters.

Plasters spread on rubber sheeting have been found the best of any for practical use. We have recently received some of these, manufactured by the firm of Seabury & Johnson, London and New York, and after careful inspection and some use of them, can speak of them in terms of high praise, for carefulness in manufacture and efficiency of result. Messrs. S. & J. deal in india rubber, medicinal, porous, isinglass, mustard, corn, bunion, court and surgical plasters, lint, oiled silk, gutta percha tissue, Lister's antiseptic and every variety of surgical dressings.

—Mrs. Rebecca Anderson, aged 111 years, died in Shelbyville, Ind., on Sunday, March 30th.

## Personal.

—Frank Woodbury, M.D., has removed to No. 218 South Sixteenth street, first door below Walnut street.

—Dr. Benjamin B. Wilson, of this city, performed, on March 15th, his fiftieth operation for ovariectomy. Of these fifty cases, three-fourths have been entirely successful.

—Professor Samuel Philip Sadtler has been elected to the Chair of Chemistry in the College of Pharmacy, in Philadelphia, to succeed Professor Robert Bridges, resigned.

—The Trustees and Faculty of Rush Medical College, Chicago, Ill., announce the establishment in that Institution of a Professorship of Gynecology, and that Prof. Wm. H. Byford, A.M., M.D., of Chicago, has accepted the appointment to fill the new chair.

—Prof. Moleschott, the eminent Dutch physiologist, was invited to Italy, at the instance of Count Cavour—that far-seeing and indefatigable laborer for his country's good—and after eighteen years of brilliant and successful tuition in Turin, is now transferred to Rome.

## Items.

—The thirty-fourth annual meeting of the Ohio State Medical Society takes place in Dayton, commencing June 3d, at 2 o'clock P.M.

—Dr. C. R. Gorman died at Pittston, April 3d. He was a well-known politician, and had served two terms in the State Legislature. He was one of the oldest Masons in the county.

—Dr. Charles F. Deshler, Secretary of the New Jersey State Sanitary Association, and a prominent physician of Hightstown, N. J., died on the 31st ult., of scarlet fever, contracted in the performance of his professional duties.

—Scarlet fever and diphtheria are still very prevalent in New York city. During the month of March there was a slight increase in the number of cases of scarlet fever reported, while the cases of diphtheria have neither increased nor diminished. About 800 cases of scarlet fever occurred in the month.

—Dr. Sales-Girons, the well-known writer and hydrological practitioner, recently died, at the age of seventy-one, from the effects of adynamic pneumonia. Having had the editorship of the *Revue Médicale* since 1849, he has constantly and ably employed it in developing the doctrines of animism, and has frequently proved a powerful opponent of the materialist views of the Paris School of Medicine.

—The dailies state that two Chinese lepers, picked up in the slums of Chinatown, San Francisco, will be brought east in a few weeks, exhibited in Boston, New York, this city and other places, and set down on the steps of the Capitol at Washington before Congress shall have adjourned. Thomas Bates and Dr. C. C. O'Donnell are the persons who will thus put the Atlantic coast people through a course of instruction in the matter of Chinese immigrants. The plot is a shallow one.

## QUERIES AND REPLIES.

*Dr. S. E. J.*—"Is there such a disease as "scarlet rash," separate from scarlatina (or not in connection with scarlatina)?"

*Ans.*—The two words are synonyms for the same disease.

*Dr. D. N. McB., of O.*—We do not know the nostrum you speak of, for epilepsy. All the secret remedies for this disease, probably, are combinations of the bromides, variously disguised.

A Correspondent replies to "W. W. S., of Indiana," advising the use of kerosene oil, both as a gargle and spray, in follicular laryngitis. He has derived benefit from it in severe cases.

*Stimulus.*—Tarragona wine was issued to the Federal troops during the war. It is similar to a low grade of port. At present we do not think it is imported; at least, we have not been able to learn where it is to be had.

*Orient.*—The plague was in Moscow in 1770-71.

## MARRIAGES.

**BIXBY-COLLINS.**—On December 26th, 1876, by Rev. J. S. Boyd, Dr. G. W. Bixby and Miss Linna Collins, all of Adair Co., Mo.

**COCHRAN-HART.**—At the house of the bride's father, near Andover, N. J., on March 6th, by Rev. A. Craig, Clarence F. Cochran, M.D., of Linden, Mich., and Sarah Cecelia Hart, daughter of Wm. H. Hart, Esq.

**KELTON-DILLINGHAM.**—In Philadelphia, on the 12th ult., by the Rev. George Dana Boardman, D.D., assisted by the Rev. J. M. Crowell, D.D., Allan C. Kelton, U. S. Marine Corps, and Laura, daughter of Dr. S. Dillingham.

**RUSHMORE-MITCHELL.**—On Wednesday, March 26th, by the Rev. R. S. Storrs, D.D., LL.D., John D. Rushmore, M.D., and Lillie L., daughter of Chauncey L. Mitchell, M.D., all of Brooklyn, N. Y.

**STAVERS-PFEIFFER.**—On the 10th ult., at the Second Presbyterian Church, Camden, N. J., by Rev. L. C. Baker, Pickering Stavers and Emma B., daughter of Dr. G. S. Frederick Pfeiffer, all of Camden.

**WIGGINS-SHANNON.**—At the residence of the bride's mother, Feb. 27th 1879, by Rev. John Gourley, S. L. Wiggins, M.D., and Miss Mary W. Shannon, both of Black Lick, Indiana county, Pa.

## DEATHS.

**BANES.**—In this city, on the 23d ult., Carrie, wife of Dr. S. T. Banes, and daughter of Mary and the late Frederick Ellinger, aged 33 years.

**CROOK.**—In New York, on Saturday, March 22d, Dr. John T. Crook, late of San Francisco, Cal., in the 45th year of his age.

**DAY.**—On March 24th, Mrs. Emma Day, wife of Dr. D. C. Day, formerly of this city, now of Bolivar, Tenn.

**ELY.**—At Rochester, N. Y. March 27th, 1879, William W. Ely, M.D., LL.D.

**HARRIS.**—In this city, on Friday, March 28th, James M. Harris, M.D., D.D.S., in the 60th year of his age.

**HARTSHORNE.**—On the 31st ult., Anna, widow of Dr. Joseph Hartshorne, in her 88th year.

**HELFENSTEIN.**—In Norristown, Pa., on the 19th ult., Dr. Benjamin W. Helfenstein, in the 61st year of his age.

**MAURY.**—On the evening of April 1st, in the 35th year of her age, Katharine Margaret Preston, wife of Francis F. Maury, M.D., and daughter of Charles Ingersoll, Esq.

**MINOR.**—On Sunday evening, March 23d, of pneumonia, James Monroe Minor, M.D., of Fredericksburg, Va., late Passed Assistant Surgeon in the United States Navy, in the 64th year of his age.